LACERATION OF THE CERVIX UTERI AS A FACTOR IN PRODUCING PLACENTA PRÆVIA.

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The subject proposed is one that has engaged my attention for some years, and I will endeavor to substantiate my theory by referring to three cases occurring in my own practice, briefly alluding to them, and only so far as relates to our subject.

Case I.—Mrs. H., multipara, with a history of five premature deliveries from the fifth to eighth months of utero-gestation; resulting, as was stated by former physician, from laceration of the cervix uteri. I saw the patient first July 30, 1884. She was then about the seventh month of pregnancy. She had some slight pains with some hemorrhage. Rest and fld. extr. viburnum prun. were prescribed. August 3d a sudden flow of blood, without pain, occurred. I found, upon examination, a large, old laceration that extended up the vaginal junction, the os undilated, the cervix obliterated; the hemorrhage was not great until August 9th, about 8.30 A.M., when it was profuse. I found the os dilating and a soft, fleshy mass presenting; patient in good condition. I tamponed firmly. At 11 A.M.; bleeding recurred, removed tampon; dilatation had advanced. I now determined to detach a portion of the placenta, and liberated the right segment of a centrally placed placenta; free bleeding ensued. I now drew the detached portions through the cervix and doubled it over upon itself, with the cervix between the folds. I kept it firmly compressed with my three fingers within the uterine cavity, rupturing the membranes. The head engaged, and although my patient

was very weak from loss of blood, she was still brave and self-reliant. Hemorrhage was controlled by the compression. The child, exsanguined and dead, was delivered at 12.30 P.M. Ergot was used hypodermatically on account of nausea.

CASE II.—Mrs. T.; seventh pregnancy and between the sixth and seventh month. Has a history of placenta prævia previously that nearly terminated her life. Was seen on the night of August 7, 1885. The patient was awakened by a free hemorrhage, and found presenting from the vulva a pouch of membranes. She attempted to replace them, but desisted, as the attempt increased the pains. I found her in good condition. I ruptured the membranous pouch, and the umbilical cord was found contained. Examination showed that a disk of placenta was firmly attached over the larger circumference of the os, and that the presentation was transverse. The bleeding was quite free. I quickly detached enough of the placenta to double it over and out of the os, and brought down the feet and delivered a small child at 1.40 A.M. Ergot was given, but she vomited; it was then injected hypodermatically. The placenta remained firmly attached. The patient became very faint and nauseated when I attempted to remove it. Uterine action was very weak, Credé's compression used, but also caused great pain, nausea, and prostration if much pressure was exercised. The bleeding was quite free, but some uterine contraction occurred, and the placenta was still further detached. I found very firm adhesions under the insertion of the cord. The placenta was delivered and uterine contraction secured. There was an old and extensive laceration of long duration.

CASE III.—Mrs. G., multipara, with three children, and history of three premature deliveries attended by profuse bleedings, repeated at periods of weeks and lasting for days. Now nearly four months pregnant. Has been bleeding for several days. Extensive laceration existed for several years, but operative measures had been declined. When examined I found what I thought to be an extrusion of the fœtal membranes through the os, and attempted to turn the mass out with my fingers, but found it firmly attached within the uterus and the adhesions extending into the cleft of the lacerated cervix—virtually an ectopic gestation. Sims' speculum showed the ovum firmly attached, with large bloodvessels extending from the attachments

and over the laceration. The mass was expelled and proved to be a twin conception.

The opinion I hold is, that such lacerations tend to produce the condition of placenta prævia. The whole uterus is kept in a state of hyperæmia by the injury; and, further, that endometritis results in a degree not always sufficient to prevent conception. Also, that the change in the shape of the uterine cavity produced by the laceration and the inflammatory processes resulting from such laceration; and that such changed contour of the cavity tends to favor gravitation of the ovum to the cervical zone and its attachment over or within the cervix uteri, and in the case mentioned, No. III., in the spread of the fœtal membranes, and that the villosities found ready attachment to the vascular surface of the old laceration. The frequent recurrence of premature expulsion of the contents of the gravid womb by women with neglected cervical tears has been observed by all of us. May not this tendency to abortion be aggravated by the changes in the uterine cavity and of the increased vascularity of the whole organ, but especially in the cervical zone; this is due to the prolonged irritation produced by the laceration. Such injuries do not prevent conception, for we note the frequency of the recurrence of pregnancy and its frequent interruption by abortion. This was illustrated in the three cases I allude to. We are taught that in the early stages of pregnancy in a healthy womb that the cervix is but slightly hypertrophied, and that it is less abundantly supplied with blood than the body of the uterus, and that the cervix is not subjected to the shock or stimulus, owing to the presence of the growing ovum. The intra-vaginal portion of the cervix also loses its firm consistence and becomes softer as pregnancy advances; these changes are arrested or prevented by the presence of an old unhealed laceration that keeps up a chronic state of irritation, with its consequent hypertrophy and hyperplasia. True, the process of softening is less in the multigravida, and that frequent pregnancies do tend to produce chronic inflammatory conditions in the cervix and endo-

metrium. Also, that the cavity of the uterus is changed in contour by repeated pregnancies, and that we do have a greater tendency to placenta prævia in those who have had frequent and rapidly repeated pregnancies, and that the condition is rare in the primigravida. May this not be due to the fact that in the primiparous woman the healthy condition of the uterus, and especially the normal condition of the cervix, prevents the tendency to a descent of the ovum and its subsequent attachment within or near the cervix, where in the normal cervix it will not find sufficient blood-supply to sustain it. The frequent existence of cervical lacerations may be potent causes in producing placenta prævia, for we all know how often such lacerations exist, and how comparatively seldom do women submit to treatment for their abatement, although frequent abortions and premature labors occur, with all the dangers and restraints imposed by such conditions; yet, they are borne in silence and operative measures declined.

In my search for the literature of the subject I have found but little that will substantiate my theory. In a paper read before the American Gynecological Society, by Dr. Ed. Warren Sawyer, of Chicago, "On Partial Rotation of the Ovum as a Cause of Placenta Prævia" (see vol. xiv. 1889, p. 317), he speaks of a partial detachment of the ovum from its normal site, and alludes to two cases—one a primipara who jumped from a carriage drawn by runaway horses, she then being pregnant about five weeks, this followed by uterine hemorrhage; pregnancy was continued to term, but placenta prævia was the condition. The other case, a multiparous woman, who, in the early weeks of pregnancy, stepped off a chair and received some shock; this case, also, was one of placenta prævia. He claims that the ovum may be partially detached and rotates upon its axis and forms new adhesions within the cervical zone. The point of such contact becomes the placental site, and thus placenta prævia is produced. The permanent condition of traumatism that exists where there is an unhealed lacerated cervix, with the changes produced in the shape of the cavity, all tend to produce a condition favorable

to abortion; but should the ovum be arrested and become implanted within the cervical zone, we have a cause for placenta prævia. True, the irritation is aggravated by the hyperæmia already existing, and pregnancy is most often interrupted in the early weeks, and that such premature interruptions of pregnancy are usually attended by profuse hemorrhage.

I submit this paper for a free discussion, only with the view of eliciting the opinions of those so well qualified to discuss the matter, and perhaps future observation from them may tend to confirm or reject my views. As it is rare for one physician to have many of such cases, the combined experience of those present will be valuable.